

Remarks

The amendments

The amendment to the Specification

The amendment merely updates the information in the original *Cross-references to related patent applications* with the serial numbers of the US national phase applications and corrects a typographical error in the PCT number of PCT/US99/14585. No new matter is added thereby.

The amendment to claim 1

Examiner will immediately see that the amendment is fully supported by the Specification as filed. The claim as presently amended clearly sets forth in its preamble that the query is “on a virtual database table . . . appearing to have one or more rows”. It also clearly sets forth at lines 9-12 that

the virtual database service receiv[es] the query, respond[s] to the field name and the indication of the manner of selecting a row as required to obtain the information to be provided from the information source, and provid[es] the information in a form that is proper for the response,

There thus can be no doubt that the virtual database table does not really exist and that the it is virtual database service that interprets the query as required to obtain the information to be provided from the information source and puts the information into a form that is proper for the response to the query. As amended, the claim thus “particularly point[s] out and distinctly claim[s] the subject matter which the applicant regards as his invention” and thereby satisfies the requirements of 35 U.S.C. 112, second paragraph.

The claim rejections

What Applicants are claiming

Applicants’ claim 1 as amended sets forth their invention as follows:

1. (currently amended) Apparatus for providing information as a response to a query on a virtual database table, the virtual database table appearing

to have one or more rows, each row having one or more fields, the query including a field name of the named fields and an indication of a manner of selecting a row of the rows and the apparatus comprising:

a virtual database service; and

an information source for the information to be provided,

the virtual database service receiving the query, responding to the field name and the indication of the manner of selecting a row as required to obtain the information to be provided from the information source, and providing the information as the value of the field indicated by the field name in the selected row,

whereby the apparatus presents the virtual database table to a source of the query .

As set forth in this claim, what Applicants' claimed "apparatus for providing information as response to a query on a virtual database table" does is provide a query interface for which permits queries on a non-existent database table to be employed to obtaining information from information sources. What makes this possible is the virtual database service, which responds to the query "as required to obtain the information to be provided from the information source" and to "provid[e] the information as the value of the field indicated by the field name in the selected row", i.e. in the form that would be expected in a response to a query on the virtual database table. An embodiment of what is set forth in the claim is described beginning at page 96, line 30 and in FIGs. 38-40 and 54. The advantage of this arrangement is pointed out at page 101, lines 13-17 of Applicants' Specification:

A policy-enabled component needs no special software to make queries of VDB service 3813. All that is required is access to a utility program which turns a query into a message that is directed to VDB Service 3813 and that belongs to a protocol which can be interpreted by one of the database systems that VDB service 3813 emulates. Such utility programs are widely available.

The use of the query interface thus completely hides the complexity of generalized policy server 2617 from policy-enabled component 2609.

What Sanford discloses

As shown in Sanford's FIG. 1 and explained beginning at col. 5, line 15, Sanford's server 41 in Sanford's system combines information from databases 17, 15, and 33 in such a fashion that the information belongs to a single "virtual" database (col. 6, lines 6-15). Server 41 is shown in detail at 103 in FIG. 3 and discussed beginning at col. 6, line 16. Server 41 relates "identifier blocks" to data elements from individual databases 17, 25, and 33 and either puts the data elements and the identifier blocks into combined database 111 or uses fetch routine 113 to fetch the data elements from the individual databases. Search routine 115 performs queries on the data elements. The views resulting from the queries are generated by view engine 119. Where the same information is stored in data elements in different ones of the individual databases and there are discrepancies in the information, view rule library 117 contains rules which determine what is displayed.

Though Sanford speaks of a virtual database at col. 6, lines 8-9, he discloses nothing like the virtual database table and virtual database service of Applicants' claims. There are two implementations of Sanford's system; in one of them, the combined information from databases 17, 25, and 33 is contained in combined database 111; in this case, there is no virtual database and therefore no virtual database tables. In the other implementation, which is only sparsely described, each data element is associated not only with the information shown in FIG. 4, but also with a "contributor's reference number, to allow fetching operations to be performed in accordance with fetch routine 113." (col. 8, lines 61-64). At most, this arrangement permits fetching a row or a field from database 17, 25, or 43 into server 41, but does not explain how server 41 establishes a mapping between a field specified in a query received in server 41 and the fetched data elements. Presumably, there would still be a database in server 41 to which the query was directed. That database would probably contain versions of the record of FIG. 4 in which data element 123 was replaced by the "contributor's reference number". When a query was executed by server 41, fetch routine 113 would fetch the row or field from database 17, 25, or 33 specified by the "contributor's reference number".

Patentability of amended claim 1 over Sanford

Versions of Sanford's system which employ combined database 111 do not, of course, involve a virtual database table, since combined database 111 is a real database. A reasonable implementation of a version without a combined database 111 still requires a database of records like that of FIG. 4 where a "contributor's reference number" would replace data element 123, and Sanford provides absolutely no disclosure of how fields specified in the query are mapped to the information corresponding to the "contributor's reference number". Consequently, Sanford discloses nothing corresponding to Applicants' virtual database table or to their

virtual database service [that] receiv[es] the query, respond[s] to the field name and the indication of the manner of selecting a row as required to obtain the information to be provided from the information source, and provid[es] the information as the value of the field indicated by the field name in the selected row

Since there is nothing disclosed in Sanford that corresponds to or implies Applicants' virtual database table or their virtual database service, Sanford cannot anticipate claim 1 and the claim is patentable over the reference.

Patentability of the dependent claims

These claims are of course all patentable over the references because they are dependent from patentable claim 1. Many of the claims are, however also patentable in their own rights.

Patentability of claim 2

In his rejection of this claim, Examiner refers Applicants to Sanford's "viewing prioritization rule set". As set forth at col. 10, lines 2-5, the purpose of the rules is to "resolve the conflict between the information contained in a particular data field". As is clear from this description, a rule operates to select one variant of the information contained in a particular data field over other variants, not to determine a "match between the selection value and a pattern that matches a plurality of values", as required by claim 2. Sanford consequently does not disclose the added limitation of this claim.

Patentability of claim 4

Here, Examiner refers Applicants to FIG. 8 and col. 12, lines 4-16. What these locations disclose is the manner in which Sanford restricts write access to information in combined database 111 to the owner of the database which is the source of the information. Since there is nothing in Applicants' claimed invention that corresponds to combined database 111, Sanford's disclosure is simply not relevant to Applicants' claim 4. Indeed, what claim 4 addresses is the use of the virtual database service to determine whether a user has access to an "information resource" that is not part of generalized policy server 2617. There is in fact no disclosure whatever in Sanford of the kind of access control which is described in Applicants' patent application.

Patentability of claims 5-12

These claims all concern additional features of the access evaluator of claim 4; as pointed out above, there is no disclosure of anything like the access evaluator or of anything like the way in which the access evaluator determines access rights to "information resources" (not data in combined database 111) in Sanford. As for the "authenticator" of claims 9, 12, and 13, col. 12, lines 35-41, which Examiner sees as disclosing the authenticator, merely set forth the difficulty of merging data that belongs to different collaborators in Sanford's system, and col. 7, lines 15-20, only describe the collaboration identification 112, which is not used to determine access rights to "information resources".

The rejections of claims 3 and 11 under 35 U.S.C. 103

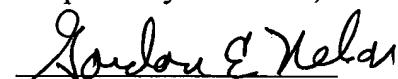
The rejection of claim 3 is of course proper only if claim 1 is anticipated by Sanford and the rejection of claim 11 is proper only if claim 5 is anticipated by Sanford. Since Sanford anticipates neither claim 1 nor claim 5, there is no basis for the rejection of claims 3 and 11.

Conclusion

Applicants have amended their *Cross reference to related applications* to properly set forth their priority claim and the status of the present patent application as a CIP; Applicants have further amended claim 1 to overcome Examiner's rejection thereof under 35 U.S.C. 112, second paragraph. Applicants have finally traversed Examiner's

rejections of the claims 1,2, 4-10, 12-14 under 35 U.S.C. 102 and his rejections of claims 3 and 11 under 35 U.S.C. 103. Applicants have thus been fully responsive to the Office action of 3/4/04 as required by 37 C.F.R. 1.111(b) and respectfully request that Examiner enter the amendment and continue his examination, as provided by 37 C.F.R. 1.111(a). Applicants are further submitting a Petition for a three-month extension of time together with the requisite fee of \$950.00 No other fees are believed to be required. If any should be or if any overpayment has been made, please charge the additional fees or refund any overpayments to deposit account number 501315.

Respectfully submitted,



Attorney of record,

Gordon E. Nelson
57 Central St., P.O. Box 782
Rowley, MA, 01969,
Registration number 30,093.
Voice: (978) 948-7632
Fax: (866)-723-0359

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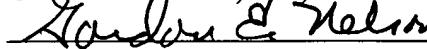
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